

Bird-life at Yoting.—Yoting is a siding 14 miles east of Quairading on the York-Bruce Rock railway. The annual rainfall is 14 inches. Most of the land has been cleared for wheatgrowing, and within a mile of the siding fewer than 200 acres still carry natural vegetation. The latter mainly comprises strips of York gum with jam. Only a few acres of the salmon gum-gimlet association remain. In addition there is a remnant of sandplain vegetation, known here as "tamma," which is dominated by a low, bushy *Casuarina*.

Only two arboreal species showed any habitat restriction; the *Sittella* was confined to salmon gums, and the Brown Honeyeater to tamma.

The following list is that of birds seen within a mile of the siding during my visit (from December 2, 1952 until January 16, 1953). After each resident species comparative abundance is indicated by an index (up to 10), which is based on rough population counts. Visiting species are marked "V".

Banded Plover (4), Black-fronted Dotterel (V), White-faced Heron (V), Whistling Eagle (1), Brown Hawk (1), Boobook Owl (seen; numbers unknown), White-tailed Black Cockatoo (V), Galah (V), Port Lincoln Parrot (9), Smoker Parrot (4), Mulga Parrot (3), Bee-eater (1), Pallid Cuckoo (V), Black-eared Cuckoo (V), Welcome Swallow (V), White-backed Swallow (3), Tree Martin (2), Willy Wagtail (4), Red-capped Robin (3), Rufous Whistler (2), Western Shrike-thrush (1), Magpie-Lark (3), Black-faced Cuckoo-shrike (1), White-browed Babbler (5), White-fronted Chat (6), Weebill (1), Chestnut-tailed Thornbill (3), Yellow-tailed Thornbill (10), Black-faced Wood-swallow (8), Black-capped *Sittella* (1), Red-tipped Pardalote (1), Brown-headed Honeyeater (V), Brown Honeyeater (2), Singing Honeyeater (4), Yellow-throated Miner (1), Red Wattle-bird (1), Pipit (7), Zebra Finch (3), Little Crow (7), Grey Butcher-bird (1), Western Magpie (2).

Around Pantapin Siding, 4 miles east of Yoting, there is considerably more scrub, especially of mallee and sandplain. Here were seen Brown Thornbills, Crested Bell-birds, and White-eared Honeyeaters, in addition to most of the species listed for Yoting. The Common Bronzewing and the Kestrel were observed at Pantapin and also at Badjaling (5 miles west of Yoting), but neither, strangely enough, were noted at Yoting.

—GLEN STORR, Floreat Park.

Birds and Intense Heat.—On January 21, 1953, we experienced an exceedingly hot day. The shade temperature recorded was 115° F. A number of instances of how birds reacted to the conditions came under my notice. Several individuals sheltered under my house, entering through a small opening, 1½ in. high and 2 ft. long, which was on the east side and in the shade during the heat of the day. Here Yellow-tailed Thornbills (*Acanthiza chrysorrhoa*) sheltered between 1.30 and 6 p.m. One Red-tipped Diamond-bird (*Pardalotus substriatus*) and one Singing Honeyeater (*Meliphaga virescens*) were also there for a short period. One Yellow-tailed Thornbill flew

into the house, two were sheltering in a shed for a considerable time, and 14 individuals were found in a small deep burrow-like hole in the ground about 8 in. in diameter and 30 in. long. As I walked past the "stand-pipe" where the farmers fill up their water tanks I noticed two Miners (*Myzantha flavigula*) on the ground beneath the slowly dripping pipe; they were trying to keep cool by standing in the mud, often lying right down and dipping their beaks in. A third bird flew in from a nearby mallee to join the birds on the wet patch which was no more than 5 in. in diameter. At 4 p.m. I found a dead Red-tipped Diamond-bird in the Post Office near the door and which must have succumbed since 2 p.m. At 4.40 p.m. a neighbour brought in a dead immature Black-throated Butcher-bird (*Cracticus nigrogularis*).

February 21 was another day of intense heat, the shade temperature rising to 112° F. The following observations on birds were made at the Beacon Hall, a galvanised iron building situated over a half-a-mile from the township, in tall jam scrub. Several birds were sheltering under the hall though there was little clearance between the floor and the ground. A Willy Wagtail (*Rhipidura leucophrys*) was seen to fly from under the building to the shade under jam trees, occasionally calling the harsh metallic "ehitti-ehitti-ehitti" call. A Singing Honeyeater sheltered under the hall. An Australian Pipit (*Anthus novae-seelandiae*) flew out from under the hall at my approach. I went to the tank for a drink and allowed some water to run into an upturned tank lid under the tap. Later six Magpies (*Gymnorhina dorsalis*) were seen drinking from the lid. Chestnut-tailed Thornbills (*Acanthiza uropygialis*) were quite common, both sheltering under the hall and in the nearby jam scrub, "erouehing" at the bases of the jams in slight depressions surrounded by a large amount of dead plant debris. Several of these thornbills were noted under a small woodheap near the hall.

—DONALD N. CALDERWOOD, Beacon.

The Distribution of the Bee Genus, *Trigona*.—In 1935 the author demonstrated that the tiny stingless bees in the Tribe Meliponini were confined to a narrow zone within the Tropics of Cancer and Capricorn throughout the world. All of the species are very small indeed, only a mere two or three millimetres in length, but they are nevertheless extremely interesting, because they have a social organization comparable with that of the domestic hive-bee, *Apis*: that is there are queens, drones and "workers", building numerous cells of a primitive chocolate-coloured wax. Honey and pollen, also certain kinds of resin, and kino, are gathered for common use by the colony.

In a broad way one can say that the hive bee, *Apis*, is not "happy" in the equatorial zone. The stingless *Trigona* are equally "unhappy" in the temperate zone. Consequently they are seldom found below 32° South, the latitude of Perth and Broken Hill. There are rare records of one coal-black species, *T. carbonaria* Sm., being taken as far south as Sydney.